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NONARTHRA CYANEUM BALY (COLEOPTERA: CHRYSOMELIDAE: ALTICINAE), A PAN-PACIFIC FLEA BEETLE[1]

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A gift of insects in December 1978, to the North Dakota State Insect Reference Collection by Captain Mike Knutson, U.S. Army, included 9 specimens of an unusual species of flea beetle (Fig. 1) having only 9 antennal segments (Fig. 2). Collection data are: "Ft. Sherman, Panama C.Z. Feb. 1976", "Mike Knutson Collector".

No alticines previously known from the western hemisphere have such reduced antennae—the majority of genera have 11 segments and a few genera have 10 (Arnett, 1962; Scherer, 1962). Dr. G. Scherer,[2] a world authority on the Alticinae, informed me that to his knowledge, only the genus *Nonarthra* Baly, known from the Orient, contains species with 9 segments per antenna. I therefore compared our specimens with the literature describing this genus and was convinced that the beetles from Panama were a *Nonarthra* species.

Heikertinger and Csiki (1940) listed 29 species of *Nonarthra* valid at that time which are distributed from Australia (Queensland) and the Celebes [the Australian Faunal Zone], Borneo, Viet Nam, India, Burma, the Philippine Islands, Southern China [the Oriental Faunal Zone] to China, Korea, and Japan [the Palearctic Faunal Zone]. Maulik (1926) included 8 species in his keys to the species of India, Ceylon and Burma; and Scherer (1969), who later revised Maulik's treatment, reduced this number through synonymy to 4. Gressitt and Kimoto (1963) listed 7 species for China and Korea, also further reducing through synonymy the earlier list of Heikertinger and Csiki (1940). Kimoto (1965) included 5 species for Japan and Samuelson (1973) listed one species, *N. cyaneum* Baly, for Oceania.

In attempting to identify the Panamanian specimens to species I used the papers of Maulik (1926), Scherer (1969), Gressitt and Kimoto (1963) and Kimoto (1965). The beetles keyed to *N. cyaneum* Baly (1874) in the publications of the latter two authors. Through the kindness of Dr. Richard E. White[3] I obtained the loan of 3 specimens of this species, collected in Szechuan Province, China, and which now belong to the U.S. National Museum. I also compared the Panama specimens with one labeled "Suhara [Japan] Gifu Prcf. 13·5·1951" and one labeled "Erzendjanzcy Mai 1938 Mandschurei" [Manchuria], both determined as *N. cyaneum* Baly by Dr. G. Scherer, to whom I am grateful for the gift of these two specimens. I

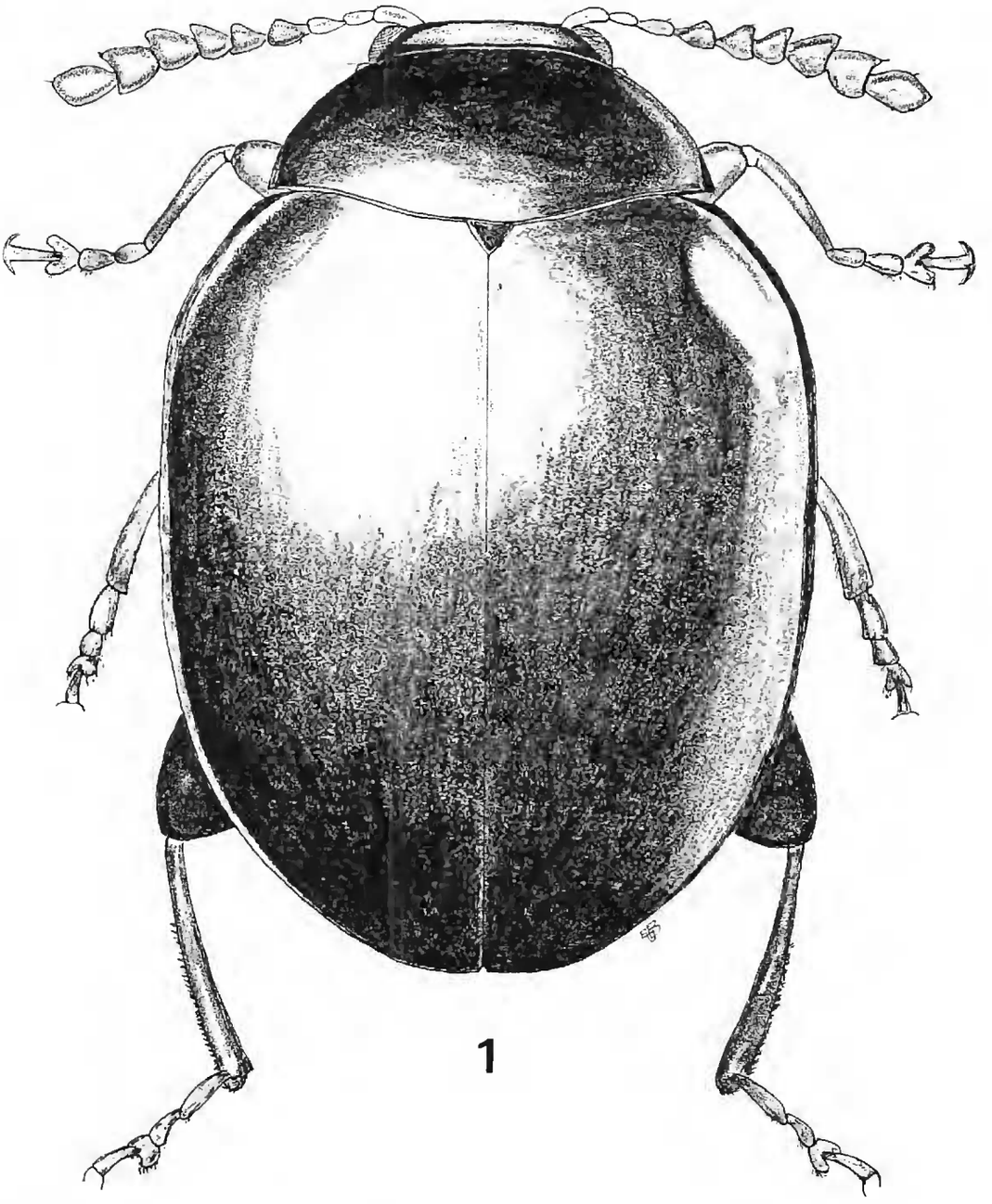
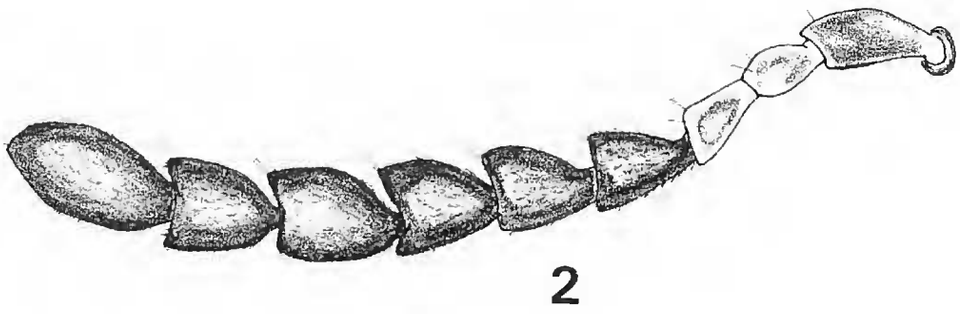


Fig. 1. *Nonarthra cyaneum* Baly.

believe that the recent specimens from Panama are representatives of *N. cyaneum* Baly. They agree very closely with the determined specimens I have seen but differ slightly in that 2 of the 3 China specimens of the USNM are slightly more brownish on the dorsum, rather than the normal blackish blue. I suspect that these 2 brownish specimens were teneral when collected—which is also indicated by their soft, distorted shapes. They differ from *N. tibiale* Jacoby, which is similar in appearance. *N. cyaneum* has the fourth antennal segment triangular (Fig. 2), rather than elongate (Kimoto, 1965). The aedeagus, however, compares favorably with that of *N. cyaneum* as illustrated by Samuelson (1973).

The previously known distribution for *N. cyaneum* Baly, 1874 (type-lo-



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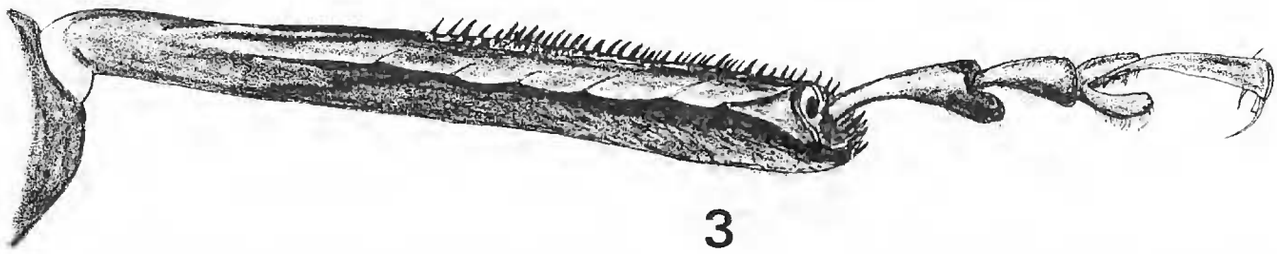

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Figs. 2–3. Fig. 2. Right antenna of *N. cyaneum* Baly. Fig. 3. Right hind tibia and tarsus of *N. cyaneum* Baly.

cality Nagasaka—type depository BMNH, London) includes Japan, China (Hopei, Szechuan, Sikang, Hupeh, Anhwei, Chekiang, Kweichow, Kiangsi, Kwangtung, Fukien), Taiwan (Gressitt and Kimoto, 1963), and Bonin Islands, Micronesia (Samuelson, 1973). The specimen from Manchuria listed in this paper represents a new regional record for China. The specific Old World source for the Panamanian beetles is not known.

The 9 flea beetles from Panama therefore represent a New World record, both for genus and species and are now even more truly pan-Pacific in distribution. They also have possible economic significance. Gressitt and Kimoto (1963) recorded beets, *Beta vulgaris* L. var. *altissima* Rossig, and a rose, *Rosa Wichuraiana* Crep. as host plants. I reconfirmed the accuracy of the collection data for the Panama specimens from Captain Knutson, the collector. He does not recall specific host plants but commented that his collection efforts while in the Canal Zone included gardens. In as much as the Panama Canal serves as a major highway for commerce, it is not surprising to learn of new introductions for that territory which may have been imported via ships.

Because these beetles are new immigrants, a reiteration of how they can be distinguished from other New World fauna would be of some value. An additional, new initial couplet can be amended to the key to "Groups" of Scherer (1962), which would distinguish this unique new "Group" having only 9 antennal segments. A brief description of the species *N. cyaneum* Baly, follows:

Ovate, convex, dark metallic blue; ventrally the pro-, meso-, and metathorax pitchy black—abdominal sternites vary from all black to all yellowish brown—the yellowish brown occurring on apical segments in specimens having both colors. Antennae pubescent, pitchy black on segments 4–9, basal 3 segments shining black on ectal surface and yellowish brown on ental surface. Head smooth, shining; sparsely, very finely punctate. Frontal calli contiguous, a slight transverse depression immediately dorsad of the calli. Prothoracic coxal cavities closed behind. Hind femora broad—width ½ the length. Apex of hind tibia rounded and edged with a row of short teeth (Fig. 3). Hind tarsus inserted in tibia on dorsal side before apex. Length of Panamanian specimens 3.3–3.9 mm. Mean 3.6 mm [3.5–4.5 mm for Oriental specimens (Gressitt and Kimoto, 1963)].

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Footnotes

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